

Patent claims

1. A method for controlling an output signal (A) of a voltage-current converting device, to which a reference voltage is fed and in which a differential voltage signal applied on the input side is converted into a differential current signal, wherein
- a reference voltage is set for the purpose of setting an output quiescent current (I_0);
 - an envelope of the signal applied on the input side is determined;
 - the reference voltage is altered in a manner dependent on the envelope;
 - the differential voltage signal is amplified by a factor;
 - the amplified differential voltage signal is converted into a current signal.
2. The method as claimed in claim 1, wherein the reference voltage (U_{REF}) follows a voltage value of an envelope of the voltage signal applied on the input side, so that the voltage-current converting device is in an A operating mode.
3. The method as claimed in claim 1, wherein the reference voltage (U_{REF}) is set such that the voltage-current converting device is in a B operating mode or in an AB operating mode.
4. A voltage-current converting device, comprising:
- a voltage input having a first terminal (I) and a second terminal (IX);
 - a current output (A) having a first and a second terminal;
 - a first transistor (T1) connected to the first terminal of the current output, and a second

- transistor (T2) connected to the second terminal of the current output;
- an operational amplifier having a first input (+), which is coupled to the first terminal (I), having a second input (-), which is coupled to the second terminal (IX), having a first output (+), which is coupled to a base of the second transistor (T2), and having a second output (-), which is coupled to a base of the first transistor (T1), the operational amplifier (OP) having a reference input and it being possible to set a quiescent current at the current output (A) by means of a voltage at the reference input;
- featuring
- 15 a setting device (DE), which is coupled to the reference input for feeding in a regulating voltage and can be used to determine an envelope of an amplitude-modulated signal at the input (I, IX).
- 20 5. The voltage-current converter device as claimed in claim 4, wherein the device has a level detector.
- 25 6. The voltage-current converting device as claimed in one of claims 4 to 5, wherein a regulatable voltage source is provided, the output of which is connected to the reference input of the operational amplifier (OP) and which comprises a
- 30 regulating input connected to the setting device (DE).
7. The voltage-current converting device as claimed in one of claims 4 to 6,
- 35 wherein the transistors (T1, T2) of the voltage-current converting device can be operated in an A, B or AB operating mode by means of the quiescent current (I_0) that can be set by the operational amplifier (OP).

8. The voltage-current converting device as claimed in one of claims 4 to 7, wherein

5 a first load (R_{FB1}) is connected between the first input of the operational amplifier (OP) and the emitter of the first transistor (T1) and a first load (R_{FB2}) is connected between the second input of the operational amplifier (OP) and the emitter of the second transistor
10 (T2).